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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF MARKETS
WASHINGTON, D. C.



STANDARDS FOR WHEAT.

Tabulated and abridged description of the official grain standards of the United States for wheat under the United States Grain Standards Act, as established and promulgated by the Secretary of Agriculture April 13, 1918, effective July 15, 1918.

(Compiled from Service and Regulatory Announcements, Markets, No. 33, "Official Grain Standards of the United States for Wheat * * *.")

CLASSES AND SUBCLASSES.—Wheat shall be divided into classes and subclasses, as follows:

HARD RED SPRING (CLASS I).

This class shall include all varieties of hard red spring wheat, and may include not more than 10 per centum of other wheat or wheats. This class shall be divided into three subclasses, as follows:

Dark Northern Spring.—This subclass shall include wheat of the class Hard Red Spring consisting of 75 per centum or more of dark, hard, and vitreous kernels. This subclass shall not include more than 10 per centum of wheat of the variety Humpback.

Northern Spring.—This subclass shall include wheat of the class Hard Red Spring consisting of less than 75 per centum and more than 25 per centum of dark, hard, and vitreous kernels. This subclass shall not include more than 10 per centum of wheat of the variety Humpback.

Red Spring.—This subclass shall include wheat of the class Hard Red Spring consisting of not more than 25 per centum of dark, hard, and vitreous kernels. This subclass shall also include wheat of the class Hard Red Spring consisting of more than 10 per centum of the variety Humpback.

HARD RED WINTER (CLASS III).

This class shall include all varieties of Hard Red Winter wheat, and may include not more than 10 per centum of other wheat or wheats. This class shall be divided into three subclasses, as follows:

Dark Hard Winter.—This subclass shall include wheat of the class Hard Red Winter consisting of 80 per centum or more of dark, hard, and vitreous kernels.

Hard Winter.—This subclass shall include wheat of the class Hard Red Winter consisting of less than 80 per centum and more than 25 per centum of dark, hard, and vitreous kernels.

Yellow Hard Winter.—This subclass shall include wheat of the class Hard Red Winter consisting of not more than 25 per centum of dark, hard, and vitreous kernels.

COMMON WHITE (CLASS V).

This class shall include all varieties, except Sonora, of common white wheat, whether winter or spring grown, and may include not more than 10 per centum of other wheat or wheats. This class shall be divided into two subclasses, as follows:

Hard White.—This subclass shall include wheat of the class Common White consisting of 75 per centum or more of hard (not soft and chalky) kernels.

Soft White.—This subclass shall include wheat of the class Common White consisting of less than 75 per centum of hard (not soft and chalky) kernels.

DURUM (CLASS II).

This class shall include all varieties of durum wheat and may include not more than 10 per centum of other wheat or wheats. This class shall be divided into three subclasses, as follows:

Amber Durum.—This subclass shall include wheat of the class Durum consisting of 75 per centum or more of hard and vitreous kernels of amber color. This subclass shall not include more than 10 per centum of wheat of the variety Red Durum.

Durum.—This subclass shall include wheat of the class Durum consisting of less than 75 per centum of hard and vitreous kernels of amber color. This subclass shall not include more than 10 per centum of wheat of the variety Red Durum.

Red Durum.—This subclass shall include wheat of the class Durum consisting of more than 10 per centum of the variety Red Durum.

SOFT RED WINTER (CLASS IV).

This class shall include all varieties of soft red winter wheat, also red club and red hybrid wheats of the Pacific Northwest, and may include not more than 10 per centum of other wheat or wheats. This class shall be divided into two subclasses, as follows:

Red Winter.—This subclass shall include wheat of the class Soft Red Winter consisting of both light and dark colored kernels. This subclass shall not include more than 10 per centum, either singly or in any combination, of Red Russian, red clubs, red hybrids, and other soft red winter wheats possessing the characteristics of those varieties as grown west of the Great Plains area of the United States.

Red Walla.—This subclass shall include wheat of the class Soft Red Winter consisting of more than 10 per centum, either singly or in any combination, of Red Russian, red clubs, red hybrids, and other soft red winter wheats possessing the characteristics of those varieties as grown west of the Great Plains area of the United States.

WHITE CLUB (CLASS VI).

This class shall include all varieties and hybrids of white club wheat, and the common white wheat known as Sonora, and may include not more than 10 per centum of other wheat or wheats.

(The numbered footnotes below must be read in connection with the tabulation.)

Grade No.	Minimum limits of—			Maximum limits of—						
	Test weight per bushel.			Moisture.		Damaged kernels.		Foreign material other than dockage.		Wheat of other classes.
	Class	Classes Durum,	Subclass	Classes	Classes	Total.	Heat damage.	Total.	Matter other than cereal grains.	Total.
	Hard Red Spring.	Hard Red Winter, Common White, and White Club; and subclass Red Winter.		Hard Red Spring, and Durum.	Hard Red Winter, Soft Red Winter, Common White, and White Club.					
	Pounds.	Pounds.	Pounds.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1	58	60	58	14.0	13.5	2	0.1	1	0.5	5
2	57	58	56	14.5	14.0	4	0.2	2	1.0	10
3	55	56	54	15.0	14.5	7	0.5	3	2.0	10
4	53	54	52	16.0	15.5	10	1.0	5	3.0	10
5	50	51	49	16.0	15.5	15	3.0	7	5.0	10

*Sample

* SAMPLE GRADE.—Shall be wheat of the appropriate subclass which does not come within the requirements of any of the grades from No. 1 to No. 5, inclusive, or which has any commercially objectionable foreign odor, except of smut, garlic, or wild onions, or is very sour, or is heating, hot, infested with live weevils or other insects injurious to stored grain, or is otherwise of distinctly low quality, or contains small inseparable stones or cinders.

- (1) The wheat in grade No. 1 shall be bright.
- (2) The wheat in grades Nos. 1 to 4, inclusive, shall be cool and sweet.
- (3) The wheat in grade No. 5 shall be cool, but may be musty or slightly sour.
- (4) The wheat in grade No. 1 Dark Northern Spring and grade No. 1 Northern Spring may contain not more than 5 per centum of the hard red spring wheat variety Humpback.
- (5) The wheat in grade No. 1 Amber Durum and grade No. 1 Durum may contain not more than 5 per centum of the durum wheat variety Red Durum.
- (6) For each of the subclasses of the class Durum, grade No. 1 and grade No. 2, may contain not more than 2 per centum and 5 per centum, respectively, of soft red winter, common white, and white club wheat, either singly or in any combination.
- (7) For each of the subclasses of the classes Hard Red Spring and Hard Red Winter, grade No. 1 and grade No. 2, may contain not more than 2 per centum and 5 per centum, respectively, of common white, white club, and durum wheat, either singly or in any combination.
- (8) For each of the subclasses of the classes Soft Red Winter, Common White, and White Club, grade No. 1 and grade No. 2, may contain not more than 2 per centum and 3 per centum, respectively, of durum wheat.

DEFINITION OF TERMS

For the purposes of the official grain standards of the United States for wheat:

Wheat.—Any grain which, when free from dockage, contains more than 10 per centum of grain of a kind or kinds other than wheat shall not be classified as wheat. The term "wheat" in these standards shall not include emmer, spelt, and einkorn.

Basis of determinations.—Each determination of dockage, moisture, temperature, odor, onions, garlic, and live weevils or other insects injurious to stored grain shall be upon the basis of the grain including dockage. All other determinations shall be upon the basis of the grain when free from dockage.

Percentages.—Percentages, except in the case of moisture, shall be percentages ascertained by weight.

Percentage of moisture.—Percentage of moisture in wheat shall be that ascertained by the moisture tester and the method of use thereof described in Circular No. 72, and supplement thereto, issued by the United States Department of Agriculture, Bureau of Plant Industry, or ascertained by any device and method giving equivalent results.

Test weight per bushel.—Test weight per bushel shall be the weight per Winchester bushel as determined by the testing apparatus and the method of use thereof described in Bulletin No. 472, dated October 30, 1916, issued by the United States Department of Agriculture, or as determined by any device and method giving equivalent results.

Dockage.—Dockage includes sand, dirt, weed seeds, weed stems, chaff, straw, grain other than wheat, and any other foreign material, which can be removed readily from the wheat by the use of appropriate sieves, cleaning devices, or other practical means suited to separate the foreign material present; also undeveloped, shriveled, and small pieces of wheat kernels removed in properly separating the foreign material, and which can not be recovered by properly rescreening or recleaning. The quantity of dockage shall be calculated in terms of percentage based on the total weight of the grain including the dockage. The percentage of dockage so calculated, when equal to 1 per centum or more, shall be stated in terms of whole per centum; and when less than 1 per centum shall not be stated. A fraction of a per centum shall be disregarded. The percentage of dockage, so determined and stated, shall be added to the grade designation.

Foreign material other than dockage.—Foreign material other than dockage shall include all matter other than wheat which is not separated from the wheat in the proper determination of dockage, except as provided in the case of smutty wheat.

Cereal grains.—Cereal grains shall include rye, barley, emmer, spelt, einkorn, corn, grain sorghums, oats, and rice, only, and shall not include buckwheat, flaxseed, and wild oats.

Heat-damaged kernels.—Heat-damaged kernels shall be kernels and pieces of kernels of wheat which have been distinctly discolored by external heat or as a result of heating caused by fermentation.

Treated wheat.—Treated wheat shall be wheat of which more than 10 per centum has been scoured, limed, washed, or treated in any similar manner.

Garlicky wheat.—Garlicky wheat shall be all wheat which has an unmistakable odor of garlic or wild onions, or which contains garlic or wild onion bulblets in a quantity equal to one or more bulblets in 1,000 grams of wheat.

Smutty wheat.—Smutty wheat shall be all wheat which has an unmistakable odor of smut, or which contains spores, balls, or portions of balls, of smut, in excess of a quantity equal to two balls of average size in 50 grams of wheat.

Mixed wheat.—Mixed wheat shall be any mixture of wheat not provided for in the classes from I to VI, inclusive.

Grades for mixed wheat.—Mixed wheat shall be graded according to each of the grade requirements common to all of the subclasses of the class of the wheat which predominates over each other class in the mixture, except that (1) all of the grade requirements in any subclass as to the maximum percentage of other wheat or other varieties of wheat shall be disregarded, and (2) when soft red winter wheat so predominates, the grade requirements as to test weight per bushel shall be those of the subclass Red Winter. The grade designation of mixed wheat shall include, successively, in the order named, the number of the grade or the words "Sample Grade," as the case may be, the word "Mixed," and, in the order of its predominance, the name and approximate percentage of each class of wheat which constitutes 10 per centum or more of the mixture, but if only one class exceeds 10 per centum of the mixture, the name and approximate percentage of that class shall be added to the grade designation followed by the name and approximate percentage of at least one other class.

Grades for treated wheat.—Treated wheat shall be graded and designated according to the grade requirements of the standard applicable to such wheat if it were not treated, and there shall be added to, and made a part of, its grade designation a statement indicating the kind of treatment.

Grades for garlicky wheat.—Garlicky wheat shall be graded and designated according to the grade requirements of the standard applicable to such wheat if it were not garlicky, and there shall be added to, and made a part of, its grade designation the word "Garlicky."

Grades for smutty wheat.—Smutty wheat shall be graded and designated according to the method described either in paragraph (a) or paragraph (b) of this section.

(a) Before the determination of smut dockage as provided in this paragraph, the wheat shall be graded and designated according to the grade requirements of the standard applicable to such wheat if it were not smutty, except that smut balls shall not be considered as foreign material other than dockage. The loss in weight caused by the removal of smut from the wheat shall be ascertained by scouring, washing, or otherwise, and shall be calculated in terms of percentage based on the total weight of the grain free from dockage. The percentage so calculated shall be stated in terms of whole per centum and half per centum. A fraction of a per centum when equal to, or greater than, a half shall be treated as a half, and when less than a half shall be disregarded. The percentage of the "smut dockage," so calculated and stated, shall be added to the grade designation preceding the statement of dockage, if any.

(b) Smutty wheat shall be graded and designated according to the grade requirements of the standard applicable to such wheat if it were not smutty, except that (1) smut balls shall not be considered as foreign material other than dockage, and (2) when the amount of smut present is so great that any one or more of the grade requirements of the grades from No. 1 to No. 5, inclusive, can not be applied accurately, the wheat shall be classified as Sample Grade. For all grades there shall be added to, and made a part of, the grade designation, preceding the statement of dockage, if any, the word "Smutty."